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ABSTRACT

This study was designed to examine the motivation levels of middle school aged children in public schools. It is part of a larger project that seeks to determine the children's problem solving approaches to their schoolwork and common social problems. A cohort of age and gender matched participants from Beijing, China was added for a cross-cultural comparison. The Patterns of Adaptive Learning Survey (PALS) was used as a self-report measure of the participants' motivation for personal achievement, perceptions of the classroom goal structure, academic efficacy, academic strategies and cultural dissonance between home and school. (GCP)

Academic Motivation in Middle School Children: A Cross-Cultural Comparison

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DESCRIPTION OF THE STUDY

This study was designed to examine the motivation levels of middle school aged children in public schools. It is part of a larger project that seeks to determine the children's problem solving approaches to their schoolwork and common social problems. A cohort of age and gender matched participants from the public schools in Beijing, China was added for a cross-cultural comparison.

A review of the research in this area indicated that a decline in motivation of students occurs during the transition from elementary to middle school. It had been hypothesized that this decline may be due to cognitive, social and physical changes that the student is experiencing. This outcome is a detriment to the student: teacher relationship. An additional review of cultural comparisons between American and Chinese middle school aged students revealed that curriculum, parental

practices, and levels of self-efficacy have distinguished the differences between the groups. However, the participant sample size has been small and limited to Caucasian middle class participants as compared to urban Chinese. The current study used a sampling method to obtain an urban population (58% Hispanic, 20% Black, 17% White, 5% other) from the Chicago area.

The Patterns of Adaptive Learning Survey (PALS) developed by Midgley, Maehr, Hicks, Roeser, Urdan, Anderman, Kaplan, Arunkumar and Middleton (1967) was used a self-report measure of the participants motivation for personal achievement, perceptions of the classroom goal structure, academic efficacy, academic strategies and cultural dissonance between home and school. The student survey that was used is composed of 47 statements with likert responses of 1="not at all true" and 5="very true". Parental consent and student assent was

obtained. Each participant then received an explanation that their views on what motivates their behavior at school were of interest in the study and that a questionnaire measuring this is requested. All of the students agreed and the PALS was administered during a class meeting and took approximately 25 minutes. When clarification and definition of terms was needed with the younger grades, it was given; all students completed the PALS independently.

Three hundred and twenty-seven participants' responses to the PALS were analyzed. 174 participants (n=36 from Chicago area schools, n=138 Beijing schools) were in grades 4 and 5. 151 participants (n=29 Chicago area schools, n=122 Beijing schools) were in grades 6,7 and 8. The gender ratio was approximately 55:45 for each school/country.

In an ANOVA procedure level of schooling, gender and culture were examined. A main effect was determined for levels

of schooling (F=4.281, p=.017, df=2,322). The main effect for gender and culture were not statistically significant. The interaction between the variables was not statistically significant.

An oneway ANOVA of subscores on the PALS by location (i.e., Chicago, Beijing) revealed three statistically significant findings. The findings are discussed in terms of the cultural differences, level of schooling and gender differences.

GENERAL FINDINGS

Two-way ANOVA Grade x Gender x Culture

Main effect significant for culture F = 13.990

Spread vs. Level Plot of total pal score a positive linear relation

Krusal Wallace and Binomial Tests (Non parametric) also significant for culture. There were done because the variables are nominal scale and sample sizes are uneven.

Plots of the PAL subtests scores indicate skewed distributions (this is across all subjects).

MANOVA results of PAL subtests and gender and culture has statistically significant findings for the same subtest identified by the Two-way ANOVA.

SAMPLE PAL ITEMS

	Not at all true		Somewhat true		Very true
I like schoolwork that I'll learn from even if I make a lot of mistakes.	1	2	3	4	5
One of my main goals is to avoid looking like I can't do my work.	1	2	3	4	5
Our teacher lets us know which students get the highest scores on tests.	1	2	3	4	5
I feel upset because my parents and my teachers have different ideas about what I should learn in school.	1	2	3	4	5

Table 1. Descriptive Statistics of Total PAL Score by Grade and School
Dependent Variable: total pal score

GRADE	GENDER	Culture	Mean	Std. Deviation	N
Elementary	.00	Chgo	161.5000	26.8752	10
	Males	Beijing	156.0615	19.1294	65
		Total	156.7867	20.1939	75
	1.00	Chgo	164.2857	39.8861	7
	Females	Beijing	153.9583	20.0783	72
		Total	154.8734	22.3173	79
Middle	.00	Chgo	166.8182	34.7241	11
		Beijing	151.3099	15.1087	71
		Total	153.3902	19.3498	82
	1.00	Chgo	180.1667	37.3171	6
		Beijing	152.9412	13.8267	51
		Total	155.8080	19.1334	57

Table 2. Descriptive Statistics for PAL Subscore by Group

		N	Mean	Std. Deviation
AVGAPAL	Chicago	57	3.9193	.7289
	Beijing	260	3.8338	.7393
	Total	317	3.8492	.7370
AVGBPAL	Chicago	63	3.5582	.9589
	Beijing	260	3.8404	.7860
	Total	323	3.7853	.8286
AVGCPAL	Chicago	56	3.2560	1.1577
	Beijing	260	2.5237	.8298
	Total	316	2.6535	.9373
AVGDPAL	Chicago	57	3.9930	.8358
	Beijing	260	4.3154	.5571
	Total	317	4.2574	.6273
AVGFPAL	Chicago	53	3.8760	.6407
	Beijing	259	3.8378	.5615
	Total	312	3.8443	.5748
AVGGPAL	Chicago	62	2.7634	1.1922
	Beijing	260	1.7487	.7078
	Total	322	1.9441	.9137
AVGHPAL	Chicago	62	2.8038	.9707
	Beijing	260	2.3532	.9102
	Total	322	2.4400	.9377

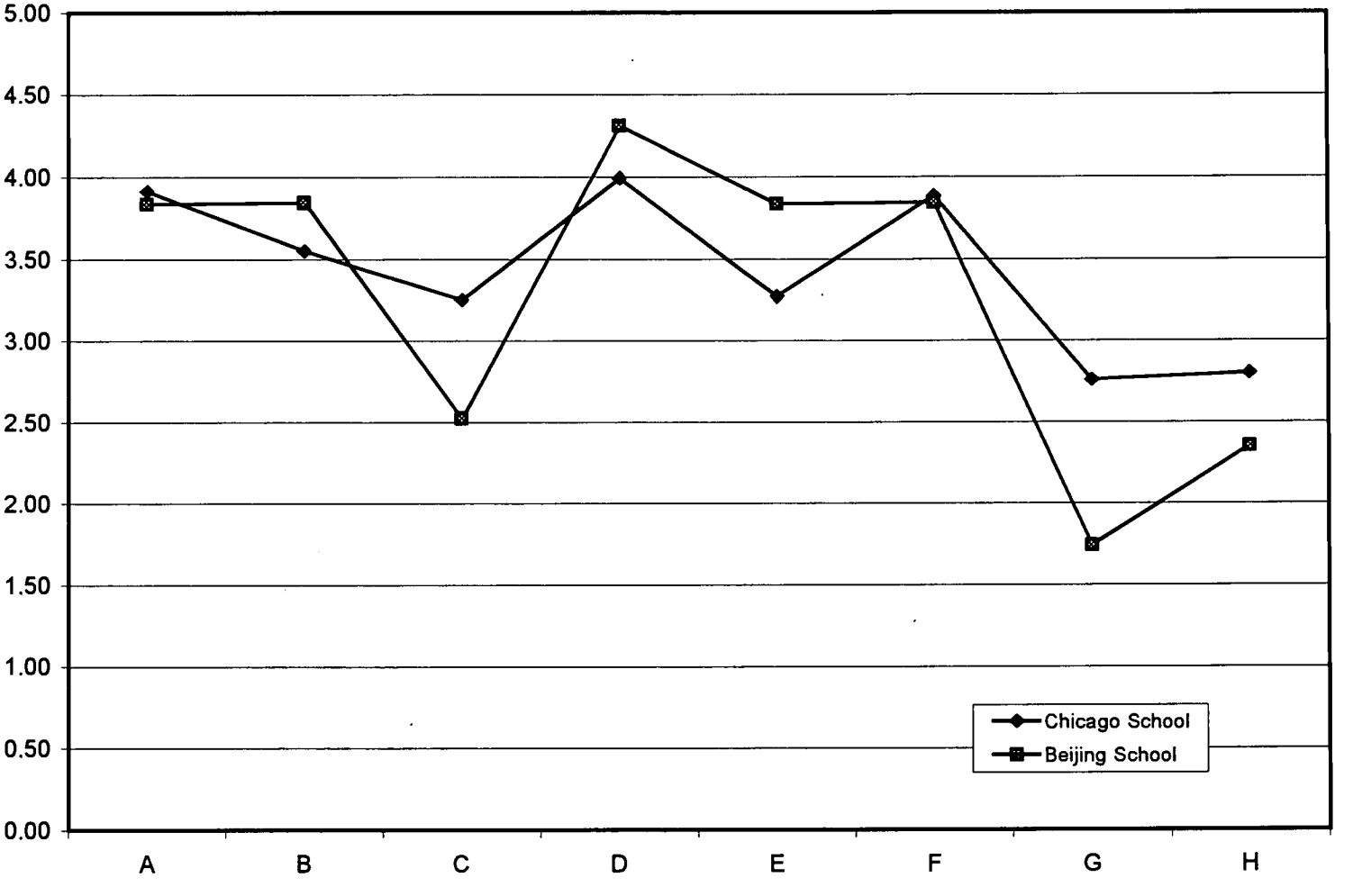
⇑

See Table 3 for these names

Table 3. Results of Two Analysis of Variance of PAL Subscore by Group

		Sum of Squares	df	Mean Square	F	Sig.
AVGAPAL Personal Achievement	Between Groups	.341	1	.341	.628	.429
	Within Groups	171.291	315	.544		
	Total	171.632	316			
AVGBPAL Personal Goal-Oriented Approach	Between Groups	4.038	1	4.038	5.973	.015
	Within Groups	217.024	321	.676		
	Total	221.062	322			
AVGCPAL Performance Avoid	Between Groups	24.704	1	24.704	30.777	.000
	Within Groups	252.046	314	.803		
	Total	276.751	315			
AVGDPAL Perception of Classroom Goal	Between Groups	4.859	1	4.859	12.810	.000
	Within Groups	119.496	315	.379		
	Total	124.355	316			
AVGFPAL Academic Efficacy	Between Groups	6.402E-02	1	6.402E-02	.193	.661
	Within Groups	102.699	310	.331		
	Total	102.763	311			
AVGGPAL Academic Self-Handicapping	Between Groups	51.547	1	51.547	76.208	.000
	Within Groups	216.447	320	.676		
	Total	267.994	321			
AVGHPAL Cultural Dissonance	Between Groups	10.163	1	10.163	11.953	.001
	Within Groups	262.065	320	.850		
	Total	282.228	321			

PAL Scores by Culture Group



Note: ANOVA of PAL scores by culture group not significant. Non-significant between group analysis findings for gender differences. ANOVA statistically significant by education level X culture.

RESULTS

Three hundred and twenty-seven participants' responses to the PAL were analyzed. 174 participants (n = 36 Chicago; n = 138 Beijing) were in grades 4 and 5. 151 participants (n = 29 Chicago; n = 122) were in grades 6,7 and 8.

The gender ratio was approximately 55:45 for each school/country.

In a 2-way ANOVA procedure, level of schooling (4^{th} and 5^{th} grade, 6-8^{th} grade), gender and culture (Chicago and Beijing schools) was examined. A main effect was determined for levels of schooling, $F = 4.281$ $p = .017$, $df = 2,322$. The main effect for gender and culture were not statistically significant. The interaction between the variables was not statistically significant. Table 1 represents the mean standard deviation and sample size for each variable tested at each level tested.

The average rating for the seven subtests by group was tabulated in Table 2. A one-way between-groups analysis of the subscores by group (Chicago versus Beijing School) revealed three statistically significant findings for Personal Goal Orientation. Approach ($F = 5.973$ dfsl, 327, $p = .015$) Performance – Avoid ($F = 30.777$, $df = 1,321$, $p = .000$), Perceptions of Classroom Goals ($F = 12.810$, $df = 1,321$, $p = .000$), Academic Self-Handicapping ($F = 76.208$, $df = 1,321$, $p = .000$) and Cultural Dissonance ($F = 11.953$, $df = 1,321$, $p = .001$).

CONCLUSIONS:

- Insufficient subject number in Chicago area schools prevented meaningful analysis to compare to schools in Beijing.

- Slight, but non-significant, findings on PAL data analysis suggest further measurement of students' perception of academic motivation is necessary.

- Unanswered research questions such as: Does a decline in motivation exist in Chinese students as it does in Americans as they make a shift from elementary to middle school? What identified similarities and differences in academic style are revealed by the PALS self-report measure between Chinese and American groups of students?

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